PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P18953WO	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE2004/001584	International filing date *(day/month/year)* 02-11-2004	Priority date *(day/month/year)* 03-11-2003
International Patent Classification (IPC) or national classification and IPC See Supplemental Box		
Applicant Telefonaktiebolaget LM Ericsson (publ) et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 3 sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
   - ☒ Box No. I Basis of the report
   - ☐ Box No. II Priority
   - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - ☐ Box No. IV Lack of unity of invention
   - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - ☐ Box No. VI Certain documents cited
   - ☐ Box No. VII Certain defects in the international application
   - ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
03-08-2005	21-02-2006
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Form PCT/IPEA/409 (cover sheet) (April 2005)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: Cover sheet

INTERNATIONAL PATENT CLASSIFICATION (IPC):

H04Q 7/28 (2006.01)
H04L 12/56 (2006.01)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/SE2004/001584

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

☐ the international application as originally filed/furnished

☒ the description:

pages 1-22 as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☒ the claims:

pages _____ as originally filed/furnished
pages* _____ as amended (together with any statement) under Article 19
pages* 1-3 received by this Authority on 13-02-2006
pages* _____ received by this Authority on _____

☒ the drawings:

pages 1-7 as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing *(specify)*: _____
- ☐ any table(s) related to the sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing *(specify)*: _____
- ☐ any table(s) related to the sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/SE2004/001584

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-14	YES
	Claims	---	NO
Inventive step (IS)	Claims	---	YES
	Claims	1-14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims	---	NO

2. Citations and explanations (Rule 70.7)

This report concerns the new claims which were received on 15-02-2006.

The application is concerned with a problem that prior art implementations of Push-To-Talk over Cellular (PoC) do not handle multimedia services in an effective way. A large text message or an image may for example delay voice frames which are very delay sensitive.

Cited documents:

D1. US 20030078064 A1
D2. US 20020077136 A1

D1, which is considered to represent the most relevant state of the art, discloses a method for queuing Push-to-Talk requests in a wireless dispatch system. The system in D1 includes a media control unit (MCU) which handles transmission requests. According to D1 the requests are queued based on the time they were received, and if desired the requests can be queued based on priority (see abstract and sections [0011]-[0012]). The system in D1 supports transmission of data information including digitized video information (see section [0020]).

D2 is a background art document and is not considered to be of particular relevance.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: Box V

The invention according to the independent claims differs from D1 in that the requests are handled based on the media type associated with the request. The system in D1 use priorities for the requests (see paragraph [0028]) but it is not stated in D1 that the priorities are based on the media type of the requests. However, it is obvious to a skilled person with general knowledge about data communications to associate the priorities with different media types (since this is a common feature in data networks). The feature of associating the priorities with different media types is thus not considered as a feature of inventive significance. Consequently, the invention according to the independent claims is considered to lack an inventive step. The features claimed in the dependent claims are considered as measures obvious to a skilled person and therefore lack an inventive step.

According to the arguments stated above, the invention is considered to be novel. However, the invention is considered to lack an inventive step. The invention is industrially applicable.

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WHAT IS CLAIMED IS:

1. A telecommunications network (10) comprising a group call service server (18) which facilitates a group call over a radio interface (32) between different user equipment units in a defined group within the telecommunications network, characterized in that the group call service server (18) handles a floor request from a requesting user equipment unit (30) included in the group based on a media type associated with the floor request, wherein the floor request comprises a floor request message which includes an indication of the media type associated with the floor request and/or an indication of message size and wherein the group call service server (18) prioritizes the floor request from the user equipment unit (30) based on the media type and wherein the group call service server (18) comprises:

a queue (42) wherein the group call service server (18) queues the floor request from the requesting user equipment;

a floor request handler (40) which prioritizes the floor request within the queue 942) based on the media type.

2. A telecommunications network (10) according to claim 1, wherein the group call service server (18) handles the floor request independently of application and/or transport protocols used to convey the floor control messages.

3. A telecommunications network (10) according to claim 1, wherein the group call service is a Push-to-Talk over Cellular (PoC) and the group call service server (18) comprises a PoC server.

4. A telecommunications network (10) according to claim 1, wherein the requesting user equipment unit (30) is configured so that, while the requesting user equipment receives a first service, a second media service which is associated with the request can be uploaded to the group call service server.

5. A telecommunications group call service, hosted by a telecommunications network (10) server, which facilitates a group call over a radio interface (32) between different user equipment units in a defined group within the telecommunications network, characterized in that the group call service handles a floor request from a requesting user equipment unit (30) included in the group based on a media type associated with the floor request, wherein the floor request comprises a floor request message which includes an indication of the media type associated with the floor request and wherein the group call service prioritizes the floor request from the requesting user equipment unit (30) based on the media type and wherein the group call service queues the floor request from the requesting user equipment unit (30) and prioritizes the floor request within the queue (42) based on the media type.

6. A telecommunications service according to claim 5, wherein the group call service handles the floor request independently of application and/or transport protocols used to convey the floor control messages.

7. A telecommunications service according to claim 5, wherein the group call service is a Push-to-Talk over Cellular (PoC) which is hosted by a PoC server.

8. A telecommunications service according to claim 5, wherein the floor request comprises a floor request message which includes an indication of the media type associated with the floor request and/or an indication of message size.

9. A telecommunications service according to claim 5, wherein the requesting user equipment unit (30) is configured so that, while the requesting user equipment receives a first service, a second media service which is associated with the request can be uploaded to a group call service server.

10. A method of operating a telecommunications group call service, hosted by a telecommunications network, which facilitates a group call over a radio interface (32) between different user equipment units in a defined group within the telecommunications network, characterized by handling a floor request from a requesting user equipment unit (30) included in

the group based on a media type associated with the floor request, wherein the floor request comprises a floor request message, and wherein the method further comprises including in the floor request message an indication of the media type associated with the floor request and further comprising prioritizing the floor request from the requesting user equipment unit (30) based on the media type and further comprising :
queuing the floor request from the requesting user equipment in a queue (42);
prioritizing the floor request within the queue (42) based on the media type.

11. A method according to claim 10, further comprising handling the floor request independently of application and/or transport protocols used to convey the floor control messages.

12. A method according to claim 10, wherein the group call service is a Push-to-Talk over Cellular (PoC) and the group call service server (18) comprises a PoC server.

13. A method according to claim 10, wherein the floor request comprises a floor request message, and wherein the method further comprises including in the floor request message an indication of message size.

14. A method according to claim 10, further comprising, while the requesting user equipment receives a first service, uploading a second media service which is associated with the request to a group call service server.